

CLAIMS

1. A holographic display comprising a pixellated hologram display device having a predetermined resolution and a pixellated phase mask arranged such that holograms displayed on the SLM are viewed through the phase mask, wherein the phase mask has a resolution higher than the predetermined resolution.
2. A holographic display comprising a pixellated hologram display device having a predetermined resolution and a pixellated phase mask arranged such that holograms displayed on the SLM are viewed through the phase mask, wherein the phase mask co-operates with the SLM such that the repeating pattern of holographic elements has a higher resolution than the predetermined resolution.
3. A holographic display according to claim 1 or 2, wherein the hologram display device is arranged to display binary phase holograms and the phase mask has four phase levels
4. A holographic display according to claim 3, wherein the display is constructed and arranged to operate at a given optical wavelength, and taking one of the phase levels as a reference, the others provide respective phase shifts of  $\pi/2$ ,  $\pi$  and  $3\pi/2$  at the given wavelength.
5. A holographic display according to claim 1 or 2, wherein the hologram display device is arranged to display four phase holograms and the phase mask has two phase-levels.

6. A holographic display according to any preceding claim wherein the hologram display device comprises an SLM.

5 7. A method of increasing the viewing angle of a hologram on a pixellated hologram display device having a predetermined resolution, the method comprising disposing a pixellated phase mask with respect to the pixellated hologram display device for viewing the hologram, wherein the resolution of the pixellated phase mask is greater than that of the pixellated hologram display device.

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8. A method of viewing a pixellated hologram, the pixels of the hologram having a predetermined resolution, comprising viewing the hologram through a pixellated phase mask, wherein the resolution of the pixellated phase mask is greater than that of the pixellated hologram.

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9. A holographic display comprising a pixellated hologram display device having a predetermined resolution and a pixellated phase mask arranged such that holograms displayed on the SLM are viewed through the phase mask, wherein the phase mask is arranged so that respective locations where its pixels meet are disposed above generally central regions of the pixels of the display device.

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